

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed June 6, 2005. At the time of the Office Action, Claims 1-36 were pending in this Application. Claims 1-6 and 17 were rejected. Claims 7-16 and 18-36 were provisionally cancelled due to an election/restriction requirement. Claims 2-5 and 17 have been amended and Claims 37-61 have been added to further define various features of Applicants' invention. No new matter is presented by these amendments. Claims 7-16 and 18-36 have been cancelled without prejudice due to an election/restriction requirement. Applicants respectfully request reconsideration and favorable action in this case.

Election/Restriction Requirement

During a telephone conversation between Examiner Koroma and Michelle LeCointe on May 5, 2005, the Examiner set forth an election restriction requirement of the claimed inventions. Applicants made a provisional election with traverse to prosecute the invention of Claims 1-6 and 17. Applicants hereby confirm that election. Accordingly, Applicants hereby cancel Claims 7-16 and 18-36 without prejudice or disclaimer and elects that the cancelled claims are subject to the filing of a divisional application.

Claims Objections

Claims 4 and 5 were objected to because of informalities. Applicants amend Claims 4 and 5 to overcome these objections and respectfully request reconsideration of the amended claims.

Rejections under 35 U.S.C. § 112 ¶1, Written Description

Claim 2 was rejected by the Examiner under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicants have amended Claim 2 to more closely match the percentage homology stated in the specification, for example at Page 6, line 24 - Page 7, line 15. Applicants have made similar amendments to Claims 3, 5 and 17, all of which now recite a 60% homology. New dependent claims 37-56 also recite increasing percentages of homology.

Applicants agree with the Examiner's characterization of the percentage homology claims as genus claims. There may be one or more species that satisfy the % homology limitation and also the stem-specific functional limitations.

However, Applicants assert that a representative number of species are adequately described for each genus. Applicants, through SEQ. ID. NO.:1, disclose at least a partial structure for each species. Further, Applicants provide a functional characteristic (stem-specificity) that applies to each species and is correlated with structure.

A similar issue was recently addressed in *Capon v. Dudas*, Slip Opinion 03-1480, - 1481 (Fed. Cir., August 12, 2005), a copy of which is attached for the Examiner's convenience. In *Capon*, the Board rejected claims to chimeric genes based on an alleged lack of written description. The Board's decision was soundly reversed by the Federal Circuit, which was persuaded in part by the fact that the "specifications provide for evaluation of the effectiveness of their chimeric combinations." *Id. at 16*. Applicants provide, by way of the Examples and elsewhere in the specification, ample description for evaluation of the effectiveness of particular promoter having at least 60% homology to SEQ. ID. NO.: 1 and, by provision of SEQ. ID. NO.: 1, also provide at least a portion of the sequence of these variant promoters.

Accordingly, Applicants submit that Claim 2 and all other claims, as amended or added, that recite particular degrees of sequence homology are described in the specification in sufficient detail to meet the written description requirement. Allowance of all claims is respectfully requested.

Rejections under 35 U.S.C. § 112 ¶1, Enablement

Claims 1-5 were rejected by the Examiner under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Applicants agree that the breadth of many claims extends well beyond a sequence that is 100% identical with SEQ. ID. NO.: 1. However, Applicants believe one of skill in the art would readily be able to make and use all claimed embodiments of the invention with the guidance of the present specification.

First Applicants note that the level of skill is generally included in the predictability of the art when addressing the Wands factors. The level of skill here is quite high, with most

practitioners being at least Ph.D. candidate graduate students if not scientists already holding a Ph.D. Accordingly, the level of direction required by one skilled in the art is low.

Further, the specification, through the cited examples, provides very detailed descriptions of how to test promoters to determine whether they function as a stem-specific promoter or not. MPEP §2164.06 states that the test for undue experimentation “is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed.” As an example of reasonable experimentation, the MPEP goes on to cite an invention in which “one embodiment... and the method to determine dose/response was set forth in the specification, the specification was enabling.

Here, the Examples provide a ready way to test the claimed sequences to determine if the functional limitation is met. Thus, while a substantial quantity of experimentation may well be needed to identify all promoters meeting the claim limitations, this experimentation merely involves plugging new sequences into methods that are well-known or described in the specification. The specification provides very detailed descriptions of ways to determine if the desired results have been obtained.

Thus, the Examiner is correct that trial and error experimentation may be required to determine all of the sequences that meet the claim limitations, but the quantity of that experimentation is not so much as to be undue because it does not require anything other than trial and error and is thus routine. Further, Applicants note that with modern advances in microbiological techniques available at the time the present application was filed, the creation of various promoters having different sequences and of constructions useful to test these sequences may well have been amenable to some degree of automation.

Applicants accordingly assert that, given the high level of skill in the art and the detailed description of ways to test promoter sequences to determine if claim limitation are met, undue experimentation is not required to make and use the claimed invention. Allowance of all claims is requested.

Rejections under 35 U.S.C. §102

Claims 3-5 and 17 were rejected as anticipated by International Patent Application Publication No. WO 01/18211 A1 by Bernard Potier et al. (“Potier”). Although it is not entirely clear to Applicants whether or not Potier allegedly discloses a JAS promoter, Applicants have nevertheless amended the claims to recite a promoter at least 60% homologous to SEQ. ID. NO.:1, which the Examiner has indicated to be free of the prior art.

Alternative Name of JAS

It has come to Applicants’ attention that the gene identified by Applicants as “JAS” is now called “dirigent gene (DIR)” in the art.

Information Disclosure Statement

Applicants enclose an Information Disclosure Statement and PTO Form 1449, with a copy of the reference and a check in the amount of \$180.00, for the Examiner’s review and consideration.

Applicants would like to bring to the Examiner’s attention that Applicants filed Information Disclosure Statements on June 29, 2005, and August 3, 2005. Applicants respectfully request that the Information Disclosure Statements be considered and cited in the examination of the above-referenced application. Applicants attach a copy of the Information Disclosure Statements and PTO Forms 1449 filed June 29, 2005 and August 3, 2005, for the Examiner’s convenience and a copy of the postcard receipt evidencing receipt by the Patent Office.

CONCLUSION

Applicants have now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicants respectfully request reconsideration of the claims as amended.

Applicants enclose a check in the amount of \$180.00 for the Information Disclosure Statement. Applicants believe there are no further fees due at this time, however, the Commissioner is hereby authorized to charge any additional fees necessary or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2580.

Respectfully submitted,
BAKER BOTT S L.L.P.
Attorney for Applicants



Michelle M. LeCointe
Reg. No. 46,861

SEND CORRESPONDENCE TO:

BAKER BOTT S L.L.P.
CUSTOMER ACCOUNT NO. **05073**
512.322.2580
512.322.8383 (fax)

Date: 7/6/05



The "Received" stamp of the Patent and Trademark Office imprinted hereon acknowledges the filing of:

Application - Spec., Claims, Abstract (<u> </u> Page(s))			Verified Statement (<u> </u> Page(s))		
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Inventor(s): Mona Damaj et al.	Serial No.: 10/751,550		Receipt Date & Serial No.:		
Title: Stem-Regulated Plant Defense Promoter and Uses Thereof.....					
Client/Applicant: TAMU	BB File No.: 017575.0775				
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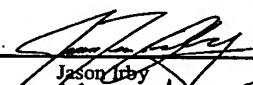


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mona B. Darmaj et al.
Date Filed: January 5, 2004
Group Art Unit: 1642
Confirmation No. 2396
Examiner: Barba Koroma
Title: **STEM-REGULATED, PLANT DEFENSE
PROMOTER AND USES THEREOF IN TISSUE-
SPECIFIC EXPRESSION IN MONOCOTS**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
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Jason Kirby
6/29/05
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Dear Sir or Madam:

INFORMATION DISCLOSURE STATEMENT

Applicants respectfully request, pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, that the references listed on the attached PTO-1449 form be considered and cited in the examination of the above-identified application. Since the present Application was filed after June 30, 2003, a copy of any U.S. Patent and any U.S. Patent Application Publication cited on the attached PTO Form 1449 is not being submitted with this Information Disclosure Statement pursuant to the July 11, 2003 waiver of 37 C.F.R. §1.98(A)(2)(i) by the U.S. Patent and Trademark Office. Furthermore, pursuant to 37 C.F.R. §§1.97(g) and (h), no representation is made that these references are material to the patentability of the present application.

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Applicants believe no fees are due for this Information Disclosure Statement, however, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P. in order to effectuate this filing.

Respectfully submitted,

BAKER BOTTS L.L.P.
Attorneys for Applicants



Michelle M. LeCointe
Reg. No. 46,861

Date: 6/28/05

Correspondence Address:

At Customer No. **05073**

Telephone: 512.322.2580
Facsimile: 512.322.8380

PTO-1449

SEP 06 2005

PATENT & TRADEMARK OFFICE

IAPST

**Information Disclosure Citation
in an Application**

Application No.

10/751,550

Applicant(s)

Mona B. Damaj

Docket Number

017575.0775

Group Art Unit

1642

Filing Date

January 5, 2004

U.S. PATENT DOCUMENTS

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
A.						
B.						
C.						
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E.						
F.						
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I.						
J.						
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FOREIGN PATENT DOCUMENTS

	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
						YES
O.						
P.						

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
Q.	Davin, Laurence B. et al., "Dirigent Proteins and Dirigent Sites Explain the Mystery of Specificity of Radical Precursor Coupling in Lignan and Lignin Biosynthesis," Plant Physiology, Vol 123, pgs 453-461	June 2003
R.	Kim, Myoung K. et al., "The western red cedar (<i i="" plicata<="" thuja="">) 8-8' DIRIGENT family displays diverse expression patterns and conserved monolignol coupling specificity," Plant Molecular Biology, Pgs 199-214</i>	2002
S.	Gang, David R., "Regiochemical control of monolignol radical coupling: a new paradigm of lignin and lignan biosynthesis," Research Paper, pgs 143-151	1999
T.	Waterhouse, Peter M., "Virus Resistance and gene silencing in plants can be induced by simultaneous expression of sense and antisense RNA," Plant Biology, Vol. 95, pgs 13959-13964	1998

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



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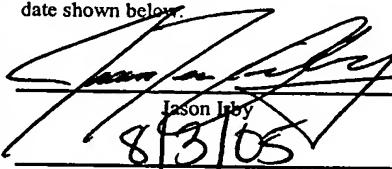


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Jason Jiby
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Date

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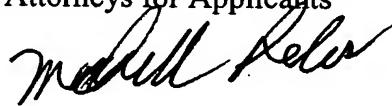
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Applicants believe no fees are due for this Information Disclosure Statement, however, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P. in order to effectuate this filing.

Respectfully submitted,

BAKER BOTTS L.L.P.
Attorneys for Applicants



Michelle M. LeCointe
Reg. No. 46,861

Date: 8/3/05

Correspondence Address:

At Customer No. **05073**

Telephone: 512.322.2580
Facsimile: 512.322.8380

PTO-1449

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**Information Disclosure Citation
in an Application**

Application No.

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Applicant(s)

Mona B. Damaj

Docket Number

017575.0775

Group Art Unit

1642

Filing Date

January 5, 2004

U.S. PATENT DOCUMENTS

		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A.	64516401	9/17/02	Flinn et al.	435	468	6/4/99
	B.						
	C.						
	D.						
	E.						
	F.						
	G.						
	H.						
	I.						
	J.						
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	L.						
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FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES
	N.	0118211	3/15/01	WO	C12N	15/29	X
	O.						

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
P.	Kim, Younghee et al., "A 20 nucleotide upstream element is essential for the nopaline synthase (nos) promoter activity," Plant Molecular Biology, Vol. 24, pgs. 105-117	1994
Q.	Bildodeau, Pierre et al., "Far upstream activating promoter regions are responsible for expression of the BnC1 cruciferin gene from Brassica napus," Plant Cell Reports, Vol. 14, pgs. 125-130	1994
R.	Kim, Seong-Ryong, "Identification of Methyl Jasmonate and Salicylic Acid Response Elements from the Nopaline Synthase (nos) Promoter," Plant Physiol, Vol 103, pgs. 97-103	1993
S.	Baldwin, Don et al., "A comparison of gel-based nylon filter and microarray techniques to detect differential RNA expression in plants," Current Opinion in Plant Biology, Vol 2, pgs 96-103	1999
T.	PCT International Search Report PCT/US04/00115, 7 pages	Mailing Date 1/5/04

EXAMINER

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